

CURRICULUM VITAE

DAVID F. CHANNELL

Historical Studies, School of Arts and Humanities
The University of Texas at Dallas
800 West Campbell Road, Mail Station Jo. 3.1, Richardson, Texas 75080-3021
channell@utdallas.edu

EDUCATIONAL HISTORY:

Ph.D. in History of Science and Technology (June, 1975) (Dissertation: "A Unitary
Technology: The Engineering Science of W.J.M. Rankine")
Case Western Reserve University

M.S. in Physics (June, 1969)
Case Western Reserve University

B.S. in Physics (June, 1967)
Case Institute of Technology

PROFESSIONAL EXPERIENCE:

Professor of Historical Studies with tenure
(September, 1990 -)

Associate Professor of Historical Studies (Sept., 1980-Sept., 1990) The University of
Texas at Dallas

Assistant Professor of History (Sept., 1975-June, 1980) The University of Texas at Dallas

Fellow (July, 1978-June, 1979) The National Humanities Institute at the University of
Chicago, Chicago, IL

Teaching Assistant and Graduate Student (Sept., 1970-June, 1975) Division of Special
Interdisciplinary Studies Case Western Reserve University, Cleveland, OH

Graduate Fellow (Sept., 1967-June, 1969) Department of Physics, Case Western Reserve
University, Cleveland, OH

Research Assistant (June, 1966-Sept., 1966; June, 1967-Sept., 1967) Union Carbide
Corporation, Parma Technical Center, Parma, Ohio

RESEARCH INTERESTS:

History of Science, History of Technology, Interactions between Science and
Technology, Science and Religion, Art and Technology

PROFESSIONAL MEMBERSHIPS:

Society for the History of Technology

History of Science Society
Center for Theology and the Natural Sciences
American Assoc. for the Advancement of Science
ICOHTEC (International Committee for the History of Tech.)
Midwest Junto of the History of Science Society
Sigma Xi

HONORS:

Listed in:

Who's Who in the World, 7th ed.
Who's Who in Science and Engineering, 2nd ed.
Who's Who in the South and Southwest, 18th ed.
Dictionary of International Biography, 16th ed.
Directory of American Scholars, 7th ed.
International Who's Who in Education

AWARDS AND FELLOWSHIPS:

John Templeton Foundation, Science and Religion Course Program, \$10,000 Prize
(1997)

National Endowment for the Humanities, Fellowship, National Humanities Institute at the
University of Chicago (1978-79) -- \$20,000

Graduate Fellowship, Department of Physics, Case Western Reserve University (1967-69)

ACHIEVEMENTS IN RESEARCH:

Grants

National Science Foundation, Science-Technology Studies Scholars Award, "The
Philosophical Roots of Engineering Science," (1999-2002) #SES-9905950 --
\$86,712

Center for Theology and the Natural Sciences, Development Award (1999) -- \$2,000

Templeton/American Scientific Affiliation, Lecture Grant (1998-99) -- \$5500

UT-Dallas, Special Faculty Development Assignment (Spring, 1997, 2000-2001)

National Science Foundation, International Programs Grant, "U.S./France Workshop on
Engineering Science" (1995-97) #INT-9513116 -- \$21,595

UT-Dallas, Green Center for the Study of Science and Society Research Fellowship
(Summer, 1994) -- \$6,000

National Endowment for the Humanities, Summer Stipend (1992) #FT-37130-92 --

\$4,000

National Research Council, International Travel Grant (Summer, 1989) -- \$750

American Council of Learned Societies, International Travel Grant (Summer, 1985) -- \$500

National Science Foundation, Research Grant "The Engineering Science of W.J.M. Rankine" (July, 1981-June, 1983) #SES-8015514 -- \$5,000

National Endowment for the Humanities, Demonstration Grant, "Humanistic Values in Modern Society," (Jan., 1981-Dec., 1982) #EH-20029-80-2058 -- \$22,000

National Science Foundation, International Travel Grant (Summer, 1981) -- \$500

UT-Dallas, Organized Research Award, "Humanistic Values in Modern Society" (1980-82)

UT-Dallas, Organized Research Award, "History of Technology Project" (1977-78)

National Research Council, International Travel Grant (Summer, 1977) -- \$500

Tuition Scholarship, Division of Special Interdisciplinary Studies, Case Western Reserve University (1971-73)

Books

A History of Technoscience: Erasing the Boundaries between Science and Technology (London: Routledge, 2017).

The Vital Machine: A Study of Technology and Organic Life (New York & Oxford: Oxford University Press, 1991).

The History of Engineering Science: An Annotated Bibliography (Bibliographies in the History of Science and Technology) (New York & London: Garland Publishing, 1989).

Scottish Men of Science - W.J.M. Rankine, F.R.S.E., F.R.S. (Edinburgh: Scotland's Cultural Heritage, 1986).

Articles

"The Computer at Nature's Core," *Wired Magazine* (February 2004): 79-80.

"Engineering Science as Theory and Practice," *Technology and Culture* 29 (1988): 98-103.

"The Harmony of Theory and Practice: The Engineering Science of W.J.M. Rankine," *Technology and Culture* 23 (1982): 39-52.

"Technology as Style: Pop Art and the New Sensibility," *Journal of American Culture* 3 (1980): 480-86.

"Technology and the Humanities: The Wingspread Conference," co-author W. David Lewis, *Technology and Culture* 21 (1980): 77-81.

"Rankine, Aristotle, and Potential Energy," *The Philosophical Journal* (Royal Philosophical Society of Glasgow) 14 (1977): 111-14.

"The Problem of Two Back-Pressures: The Development of Watt's Separate Condenser," *American Journal of Physics* 42 (1974): 65-69.

"The Early Medical Use of X-Rays in Cleveland," *The Bulletin of the Cleveland Medical Library* 20 (1973): 3-11.

Contributions to Edited Books and Proceedings

"Technological Thinking in Science." In *The Role of Technology in Science: Philosophical Perspectives*. Ed. by Sven Ove Hansson (Berlin: Springer, 2015), 27- 53.

"The Emergence of the Engineering Sciences: A Historical Analysis." In *Handbook of the Philosophy of Technology and the Engineering Sciences*. Ed. by Anthonie Meijers (Holland: Elsevier Science, 2009), 117-154.

"Thermodynamics," *Scientific Thought: In Context*, Ed. by K. Lee Lerner and Brenda W. Lerner (Farmington Hills, MI: Gale Cengage Learning, 2008) 915-923.

"Engineering Education and the Rise of Engineering Science in Great Britain," In *The Evolution of Engineering Training*. Ed. by Andre Grelon et al. (Paris: L'Harmattan, 1999).

"Sir Douglas Galton," in *The New Dictionary of National Biography* (Oxford: Oxford University Press, 1997).

"History of Physics and Technology," in *Encyclopedia of Applied Physics*, ed. George L. Trigg (New York: VCH Publishers for the American Institute of Physics, 1995), 14:35-53.

"Horatio Allen," in *American National Biography* (New York: Oxford University Press, 1995).

"The Scottish Roots of Engineering Science," in *Beyond History of Science*, ed. Elizabeth

Garber (Lehigh, Pa.: Lehigh University Press, 1990).

"William Burroughs," "Henry Corliss," "Rudolf Diesel," "John Boyd Dunlop," "Harvey Samuel Firestone," "Benjamin Franklin Goodrich," "Lewis Latimer," "James Nasmyth," "Nicholas J. Roosevelt," "Sir Charles Wheatstone," and "Sir Joseph Whitworth," in *The World Book Encyclopedia* (Chicago: World Book, Inc., 1990).

"The Role of Thomas Reid's Philosophy in Science and Technology: The Case of W.J.M. Rankine," in *The Philosophy of Thomas Reid*, eds. Eric H. Matthews and Melvin T. Dalgarno (Dordrecht, Holland: Kluwer Academic Publishers, 1989).

"John Kay," in *Great Lives from History: British and Commonwealth Series*. ed. Frank Magill (Pasadena: Salem Press, 1987), pp. 1476-79.

"The Distinction Between Engineering Science and Natural Science: W.J.M. Rankine," in *Technology and Science: Important Distinctions for Liberal Arts Colleges* (Davidson, N.C.: Davidson College and the Sloan Foundation, 1984).

"The Biological Roots of Nineteenth Century Technology," in *Science and Technology, Humanism and Progress* (Bucharest: Academy of the Socialist Republic of Romania, 1982).

Refereed Conference Proceedings:

"Weapons and Ethnology in 19th Century Britain: Lt.-Gen. Pitt-Rivers and His Museum." In *XXIII International Congress of the History of Science and Technology: Book of Abstracts* (Budapest: IUHPS/DHST, 2009), 317-318.

"Scottish Roots of Engineering Science in Japan." In *XXII International Congress of History of Science: Book of Abstracts* (Beijing: Institute for the History of Natural Science, Chinese Academy of Sciences, 2005), 267.

"The History of the Historiography of Engineering Science," in *Science and Political Order: Abstracts of Proceedings of the XVIIIth International Congress of History of Science*, eds. Fritz Krafft and Christoph J. Scriba (Hamburg and Munich: International Union of the History and Philosophy of Science, 1989).

"The Rise of Engineering Science and the Science of Energetics," in *Abstracts of Proceedings of the 16th International Congress of the History of Science - Specialized Topics* (Bucharest: Academy of the Socialist Republic of Romania, 1981).

"The Biological Roots of Nineteenth Century Technology," in *Abstracts of Proceedings of the 16th International Congress of the History of Science - Scientific Sections* (Bucharest: Academy of the Socialist Republic of Romania, 1981).

Invited Presentations:

“Weapons and Ethnology in 19th Century Britain: Lt.-Gen. Pitt-Rivers and His Museum,”
Invited symposium paper presented at the XXIII International Congress of the
History of Science and Technology, Budapest, Hungary, July 28-August 2, 2009

“The Emergence of the Engineering Sciences: A Historical Analysis,” Invited paper
presented at the Workshop on the Philosophy of the Engineering Sciences,
Eindhoven University of Technology, Eindhoven, Netherlands, January 17-20,
2007.

“The Scottish Roots of Engineering Science in Japan,” Invited symposium paper
presented at the 22nd International Congress for History of Science, Beijing, China,
July 24-30, 2005.

“On the Shoulders of Giant Twins: The Influence of Edwin T. Layton on the History of
Technology,” Invited paper presented at the Midwest Junto for the History of
Science and Technology, University of Minnesota, April 3, 1998.

"The Philosophical Roots of Engineering Science in America." Invited paper presented
at the U.S./France Workshop on Engineering Science, Lyon, France, March 11-
12, 1997.

"Technology, Biology and Postmodernism." Invited University Lecture presented at
Case Western Reserve University, Cleveland, Ohio, October 11, 1996.

"Engineering Science as Translation: The Case of W.J.M. Rankine." Invited colloquium
presented to the graduate program in the History of Technology and Science,
Case Western Reserve University, Cleveland, Ohio, October 12, 1996.

"The Historiography of Engineering Science." Invited plenary paper presented at the
U.S./France Workshop on Engineering Science, Orleans, France, October 15-18,
1995.

"The History of Engineering Science in America: The Role of Conflicting Ideologies."
Invited paper presented at the U.S./France Workshop on Engineering Science,
Orleans, France, October 15-18, 1995.

"Engineering Science as Translation: The Role of W.J.M. Rankine." Invited paper
presented at the Society for the History of Technology, Charlottesville, Virginia,
October 19-21, 1995.

"Technology and Ethics in the Age of Vital Machines." Invited University Lecture
presented at Iowa State University, Ames, Iowa, April 30, 1989.

"The Distinction Between Engineering Science and Natural Science: W.J.M. Rankine." Invited paper presented at the Sloan New Liberal Arts Symposium on Technology and Science, Davidson College, Jan. 19-20, 1984.

"Engineering Science in the Nineteenth Century: An Aristotelian Model." Invited colloquium paper presented at the Committee on the Conceptual Foundations of Science, University of Chicago, May 29, 1979.

"W.J.M. Rankine and the Cut-Off Controversy." Invited seminar paper presented at the Department of Humanities, College of Engineering, University of Michigan, Feb. 8, 1978.

"Man, Machines and Medicine." Invited paper presented at the Symposium on Philosophy and Medicine, The University of Texas at Dallas, April 14, 1976.

"The History of Radiology in Cleveland." Invited seminar paper presented at the Department of Radiology, University Hospitals of Cleveland, Oct. 11, 1973.

"The Early Medical Use of X-Rays in Cleveland." Invited paper presented at the Handerson Medical History Society, Cleveland, Ohio, Dec. 6, 1972.

Papers Presented at Professional Meetings

"Museums and Engineering Laboratories in Victorian Britain," Paper presented the meeting of the Society for the History of Technology, Cleveland, Ohio, November 4-6, 2011.

"The Relationship between Science and Technology in America," Panel paper presented at the Portland International Conference on Management of Engineering and Technology, Portland, Oregon, July 29, 1997.

"Engineering Education and the Rise of Engineering Science." Paper presented at the meeting of the International Committee for the History of Technology, Budapest, Hungary, August 7-11, 1996.

"The Role of Biological Models in the Emergence of Modern Technology." Paper presented at the Society for the History of Technology, Uppsala, Sweden, August 16-20, 1992.

"Engineering Science as Translation: The Role of Wave-Lines and Stream-Lines in Naval Architecture." Invited colloquium paper presented at the Program in the History of Science and Technology, University of Minnesota, April 17, 1992.

"From Wave-Lines to Stream-Lines: The Role of Engineering Science in Naval Architecture." Paper presented at the American Association for the Advancement of Science, Washington, D.C., February 14-21, 1991.

- "The History of the Historiography of Engineering Science." Paper presented at the XVIIIth International Congress of History of Science, Hamburg and Munich, West Germany, August 1-9, 1989.
- "Organic Mechanisms: The Biological Roots of Nineteenth Century Technology." Invited Seminar Paper presented at the Center for Historical Studies of Technology and Science, Iowa State University, Ames, Iowa, May 1, 1989.
- "The Role of Thomas Reid's Philosophy on Science and Technology: The Case of W.J.M. Rankine." Paper presented at the Thomas Reid Bicentenary Conference, King's College, University of Aberdeen, Aberdeen, Scotland, September 2-4, 1985.
- "W.J.M. Rankine and the Concept of Stream-Lines." Paper presented at the History of Science Society, Chicago, Illinois, December 27-30, 1984.
- "W.J.M. Rankine and the Development of Engineering Education." Paper presented at the Society for the History of Technology, M.I.T., Cambridge, Mass., November 1-4, 1984.
- "The Grammar of Mechanisms: Toward a Literary Model for Technology Studies." Paper presented at the Society for the History of Technology, Smithsonian Institution, Washington, D.C., Oct. 20-23, 1983.
- "Technology as Text: A Literary Model for Technology Studies." Paper presented at the Conference on Science, Technology and Literature, Long Island University--Brooklyn Center, Feb. 23-25, 1983.
- "Energetics as a Model for Nineteenth Century Engineering Science." Paper presented at the History of Science Society, Philadelphia, Oct. 29-31, 1982.
- "The Theological Roots of Nineteenth Century Engineering Science." Paper presented at the History of Science Society, Los Angeles, Dec. 27-30, 1981.
- "The Biological Roots of Nineteenth Century Technology." Paper presented at the XVIth International Congress of the History of Science, Bucharest, Romania, August 26-Sept. 3, 1981.
- "The Rise of Engineering Science and the Science of Energetics." Paper presented at the XVIth International Congress of the History of Science, Bucharest, Romania, August 26-Sept. 3, 1981.
- "Technology and Biology: Organic Mechanisms in the Nineteenth Century." Paper presented at the Society for the History of Technology, Toronto, Canada, Oct., 16-19, 1980.

"Organic Mechanisms: The Biological Technology of George Wilson." Paper presented at the Midwest Junto of the History of Science Society, University of Wisconsin, April 10-12, 1980.

"Technology: Sacred and Profane." Paper presented at the Society for the History of Technology, Newark, N.J., Oct. 17-20, 1979. (co-author, W. David Lewis).

"Technology as Style in Pop Art." Paper presented at the Society for the History of Technology, Smithsonian Institution, Washington, D.C., Oct. 20-23, 1977.

"Rankine's Thermodynamics: The Creation of an Engineering Science." Paper presented at the XVth International Congress of the History of Science, Edinburgh, Scotland, August 10-19, 1977.

"Science, Technology and Entropy." Invited discussion paper presented at the XVth International Congress of the History of Science, Edinburgh, Scotland, August 10-19, 1977.

"Rankine's Thermodynamics: An Interaction between Science and Technology." Paper presented at the Society for the History of Technology, Philadelphia, Dec. 28-30, 1976.

"Science and the Development of Engineering Education in the University of Glasgow." Paper presented at the History of Science Society, Atlanta, Dec. 28-30, 1975.

"W.J.M. Rankine's Unitary Approach to Engineering Science." Paper presented at the Society for the History of Technology, Chicago, Dec. 27-29, 1974.

"W.J.M. Rankine: The Harmony of Theory and Practice." Paper presented at the Midwest Junto of the History of Science Society, Western Michigan University, April 26-28, 1973.

"Two Problems of Back-Pressure in the Development of Watt's Separate Condenser." Paper presented at the Midwest Junto of the History of Science Society, University of Wisconsin, April 5-8, 1972.

Reviews

"Review of Raffaele Pisano's *A Bridge between Conceptual Frameworks: Sciences, Society, and Technology Studies*," *Isis* 107 (2016): 823.

"Review of Aitor Anduaga's *Wireless & Empire*," *Annals of Science*, 68 (2011): 1-3..

"Review of John Charap's *Explaining the Universe*," *Isis*, 95(2004):526-27.

- "Review of Gillian Cookson's and Colin Hempstead's *A Victorian Scientist and Engineer: Fleeming Jenkin and the Birth of Electrical Engineering*," *Isis*, 95(2004):319-20
- "Review of Crosbie Smith, *The Science of Energy*," *American Historical Review*, (2000).
- "Review of Donald Stokes, *Pasteur's Quadrant*," *Technology and Culture*, 40 (1999):390-92.
- "Review of Helga Nowotny & Ulrike Felt, *After the Breakthrough: The Emergence of High-Temperature Superconductivity*," *Technology and Culture* 40 (1999):195-97.
- "Review of Thomas Hankins & Robert Silverman, *Instruments and the Imagination*," *American Historical Review* (October, 1998): 1215-16.
- "Review of Peter Meskins and Chris Smith, *Engineering Labour*," *Technology and Culture* 39 (1998): 149-51.
- "Review of David Rothenberg, *Hand's End*," *Technology and Culture* 36 (1995):438-440.
- "Review of Barry Cooper, *Action into Nature*," *Technology and Culture* 34 (July, 1993): 713-714.
- "Review of Walter Vincenti, *What Engineers Know and How They Know It*," *Science* 253 (2 August 1991): 573-74.
- "Review of Rudi Volti, *Society and Technological Change*", *Technology and Culture* 32 (1991): 1150-1151.
- "Review of the *Thomas A. Edison Papers, A Selective Microfilm Edition: Part 2 (1879-1886)*," *Technology and Culture*, 31 (1990): 332-333.
- "Review of Leo Klosterman, Loyd Swenson, and Sylvia Rose, eds., *100 Years of Science and Technology in Texas*," *Isis* 78 (1987): 312-13.
- "Review of the *Thomas A. Edison Papers, A Selective Microfilm Edition: Part I (1850-1878)*," *Technology and Culture* 28 (1987): 126-29.
- "Review of Donald Crafton's *Before Mickey: The Animated Film 1898-1928*," *Technology and Culture* 25 (1984): 124-24.
- "Review of C. Truesdell's *The Tragiocomic History of Thermodynamics, 1822-1854*,"

Technology and Culture 23 (1982): 104-106.

"Review of Pierre Duhem's *The Evolution of Mechanics*," *Technology and Culture* 23 (1982): 106-107.

"Review of J. Bronowski's *The Visionary Eye*," *Technology and Culture* 21 (1980): 139-40.

"Review of L.T.C. Rolt's *The Steam Engine of Thomas Newcomen*," *The Eighteenth Century: A Current Bibliography*, n.s. 4 (1978): 173-74.

PROFESSIONAL CITIZENSHIP

Member of:

Official Representative from the Society for the History of Technology to the American Association for the Advancement of Science (2003-2006)

Steering Committee for the Southern Association for History of Science,
Technology and Medicine (1975-85)

Morris Fishbein Center for the Study of History, Science and Medicine,
University of Chicago (1978-79)

Nominating Committee, Society for the History of Technology (1978-79)

Abbott Payson Usher Prize Committee, Society for the History of Technology
(1993- 96)(Chair, 1994-95)

Leonardo Da Vinci Prize Committee, Society for the History of Technology
(1994-95)

Executive Council, Society for the History of Technology (1997-2000)

Advisory Editor, *Technology and Culture* (1995-2001)

Panel Member for the Division of Fellowships, National Endowment for the Humanities,
1992

Referee for *Technology and Culture*

Referee for *Techne*

Referee for the John Templeton Foundation

Referee for the National Science Foundation

Referee for the National Endowment for the Humanities

Referee for the John D. and Catherine T. MacArthur Foundation

Referee for Cambridge University Press

Referee for Routledge

Referee for Basil Blackwell, Ltd.

Referee for Oxford University Press

Referee for Peter Lang Publishers

Panelist, Templeton Foundation Workshop on Science and Religion, Gordon
College/Harvard University (June 6-11, 1997)

Co-Organizer, U.S./France Workshop on Engineering Science, Lyon, France (March 10-
12, 1997)

Co-Organizer, U.S./France Workshop on Engineering Science, Orleans, France (October
15-17, 1995)

American Delegation, XXIII International Congress of the History of Science and
Technology, Budapest, Hungary (July 28-August 2, 2009)

American Delegation, XXII International Congress of History of Science, Beijing, China
(July 24-31, 2005)

American Delegation, XVIIIth International Congress of History of Science, Hamburg
and Munich, West Germany (August 1-9, 1989)

American Delegation, XVIth International Congress of the History of Science, Bucharest,
Romania (August 26-Sept. 3, 1981)

Invited Participant, Wingspread Conference on Technology and Humanities, The
Johnson Foundation, Racine, Wisconsin, (Feb. 23-24, 1979)

American Delegation, XVth International Congress of the History of Science, Edinburgh,
Scotland (August 10-19, 1977)

Chair, Session on Symbiosis and Resistance: Science & Technology in Research and
Industry, Society for the History of Technology, Baltimore, MD (October 16-19,

1998)

Chair, Session on Culture, Symbolism and Engineering, Society for the History of Technology, Lowell, Mass. (Oct. 6-9, 1994)

Chair, Session on Technological Knowledge: European Studies, Society for the History of Technology, Sacramento, California (October 13-15, 1989)

Organizer and Chair, Work-in-Progress Session, History of Science Society, New York (Dec. 28-30, 1979)

Organizer and Chair, Session on Interdisciplinary Perspectives on History of Technology, Society for the History of Technology, Newark, N.J. (Oct. 17-20, 1979)

Outside Examiner, Doctoral Program in History, Southern Methodist University

Consultant for the *Cambridge Dictionary of American Biography* (N.Y.: Cambridge University Press, 1995)

Consultant for the Sloan Foundation and Davidson College (1984)

Consultant for Dallas Public Library (1981)

Consultant for the Institute for Environmental awareness, George Williams College (1978-79)

Consultant for the Humanities Involvement Group, Public Information Network, City of Dallas (1977-78)

Invited Speaker, Senior Honors Seminar, University of Texas at Tyler (Nov. 6, 1980)

TEACHING:

Case Western Reserve University
Undergraduate
Pop Art and Technology

University of Chicago
Pritzker School of Medicine
Social and Ethical Issues in Medicine

The University of Texas at Dallas
Undergraduate-History
Intro. to Historical Themes and Problems

Technology in Western Civilization
American Technological Developments
The Scientific Revolution
Magic and Mysticism in Early Modern Europe
The Nuclear Age in America
Revolutions and Industrialization in Europe
Political and Social Development of Modern Europe

Undergraduate-Interdisciplinary Studies

Science and Religion
Modern Art, Culture, and Technology
Ethical Problems in Sci., Tech., and Medicine
Space, Time and Culture
Evolution: From Darwin to Sociobiology

Undergraduate-Philosophy

Concepts of Human Nature
History of Philosophy II

Undergraduate - Core

Ethics: Theory and Practice

Graduate-History of Ideas

Interdisciplinary Approaches to the Humanities
Pro-seminar in the History of Ideas
Technology and Society
Modern Art and Technology
Philosophy of Technology
Technology and Nature
Science, Technology, and Romanticism
Sci., Phil., and Soc. in Early Modern Europe
Magic, Science and Religion in Early Modern Europe
Evolution: From Darwin to Sociobiology
The Hist. and Phil. of the Nuclear Age
Ethical Issues in Science, Technology and Medicine
Issues in Science and Religion
Organicism and Mechanism
Natural and Artificial Intelligence
History of American Technology
Science, Technology and Postmodernism